Frequently asked questions

1. **What is Pudendal Nerve Entrapment?**
   Pudendal Nerve Entrapment is a pain condition for no apparent reason in the lower central pelvic areas. These are the anal region, perineum, and scrotum and penis or vulva. Pain is worse upon sitting and less when standing or sitting on a donut cushion or toilet seat. The pain could be stinging, burning, stabbing, aching, knife-like, irritation, cramping, spasm, tightness, crawling on the skin, twisting, pins and needles, numbness, and hyper sensitivity. The pain is piercing and very comparable to a toothache. It often starts in one place and progresses. Frequently there is also urinary, anal, or sexual dysfunction. The pain is often on both sides.
2. **What causes pudendal nerve entrapment?**
   Pudendal nerve entrapment is caused by entrapment of the pudendal nerve. The initial constriction is often caused by pressure or trauma. As the nerve swells it encounters a natural constraint. Stretching or rubbing of the pudendal nerve can also cause pudendal nerve entrapment.
3. **What causes entrapment?**
   Pudendal nerve entrapment is usually precipitated by prolonged sitting or trauma to the sitting area, combined with a genetic and developmental susceptibility.
   Pudendal nerve entrapment is common in high mileage and it is sometimes called Cyclist's Syndrome.
4. **What is Pudendal nerve entrapment frequently misdiagnosed as?**
   Prostatodynia, nonbacterial prostatitis, idiopathic vulvodynia (idiopathic means unknown cause), idiopathic orchialgia, idiopathic proctalgia, idiopathic penile pain syndrome etc.
5. **What are the most common symptoms of PNE?**
   The main symptom is pain with sitting. You feel great in the AM until you sit for coffee, or drive to work. You get better with lying down. The pain is in the distribution of the pudendal nerve.... genitalia, perineal or rectal. It can be any combination of these areas depending on the part of the nerve entrapped.
6. **What are the treatment options?**
   1. Avoiding the offending factor that causes pain
   2. Three sequential image guided nerve blocks first with local anesthetics and later possible combined with corticosteroids
   3. Conservative medical treatment such as neurotin, Elavil
   4. Surgery with decompression of the nerves is rarely done
7. **If a patient suspects that they have pudendal neuralgia what should they do to get help?**
   First, you need to make sure that other possible conditions are ruled out. It is important to have a complete workup. Next is an image guided nerve block and if you get numb in the area of your pain and pain is gone you have a good indication that you might have pudendal neuralgia.
8. **Is there a connection between pudendal neuralgia and spinal disorders and scoliosis?**
   No.
9. **Which CPT codes are applicable for the image guided nerve block?**
   64430 Injection, anesthetic agent; pudendal nerve
   76360 Computed tomography guidance for needle placement (e.g., biopsy, aspiration, injection, localization device), radiological supervision and interpretation

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For questions regarding clinical appointments, clinical examinations, and clinic visits call Dr. Fred Howard's office at 585-241-3210.

For questions regarding pudendal nerve blocks please call Dr. P-L Westesson's office at 585-275-1839.

2/23/05

Pudendal Neuralgia

Pudendal neuralgia is pain in the area supplied by the pudendal nerve. This includes the external genitals, the urethra, the anus, and the perineum.

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Symptoms of Pudendal Neuralgia

Pudendal neuralgia is frequently caused by a mechanical and/or inflammatory damage to this nerve. Symptoms include vague pains, stabbing pains, burning sensations, pin pricking, numbness, twisting, cold sensations and pulling sensations. The area involved could be the rectum, anus, urethra, and perineum. In women, the vagina and vulva (genital region seen externally), the vaginal entrance, the minor and major labia, the mons veneris, and the clitoris. In men, the penis and scrotum may be similarly affected. Pains and paraesthesias symptoms may extend as far as the groin, inner leg, buttocks, and abdomen.

The pain and paraesthesia may be perceived in only one of these areas, in several, or in all of them. These symptoms may be unilateral or bilateral or more distinct on one side than the other, and they are usually exacerbated by sitting position. Utilization of a "doughnut" pillow and/or sitting on a toilet seat often provides some degree of comfort, as this lessens the pressure on the pudendal nerve(s). The skin overlying some of this region may react with extreme sensitivity to the slightest touch (hyperesthesia and allodynia), such that the affected person may avoid wearing certain items of clothing to avoid such discomfort.

Difficulty with normal voiding, with hesitancy or extreme urgency may cause repeated trips to the bathroom. Bowel function may be abnormal, as well as painful.

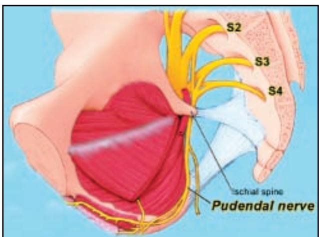
Constipation is reported more frequently among those individuals diagnosed with pudendal neuralgia. Sexual intercourse may be problematic as penetration, for the woman, may be extremely painful, and for the males erectile dysfunction and/or pain with orgasm may predominate.

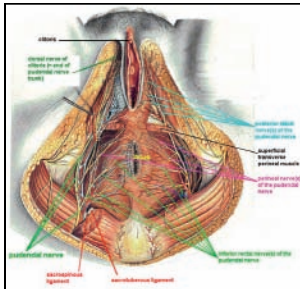
Differential Diagnosis

There are many other causes for similar symptoms and other underlying conditions such as tumors, diseases of the spine or skin, gynecological, urological, and/or proctological conditions should be excluded before concluding that the patient suffer from pudendal neuralgia. Specifically chronic or non-bacterial prostatitis, prostatodynia, vulvodynia, vestibulitis, chronic pelvic pain syndrome, proctalgia, anorectal neuralgia, pelvic contracture syndrome/pelvic congestion or levator ani syndrome can resemble pudendal neuralgia. Pain in the genital region is often brushed aside as a "psychosomatic" which leaves the patient feeling more distressed, uncertain, and helpless.

Causes of Nerve Damage and Anatomy

The pudendal nerve comes from the sacral plexus (S2-S4) and enters the gluteal region through the lower part of the greater sciatic foramen. It courses through the pelvis around ischial spine and between the sacrospinous and sacrotuberous ligaments. It splits up into the rectal/anal, perineal and clitorial/penis branches.

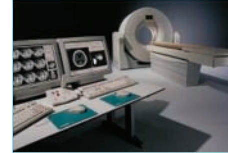




The nerve turns forward and downwards through the lower sciatic foramen underneath the surface of the levator muscle into the Alcock's canal where the nerve is flattened out between this double fascia (aponeurosis). The two most important narrow passages are around the ischial spine between the sacrospinous and the sacrotuberous ligament (80%), and in the Alcock's canal (20%). Cycling, riding and long drives can kick off the symptoms of pudendal neuralgia.

Diagnosis

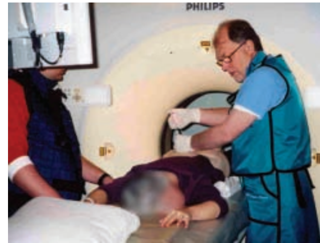
Pudendal neuralgia is a diagnosis of exclusion meaning that other causes for the symptoms should be excluded before the diagnosis of pudendal neuralgia is made.

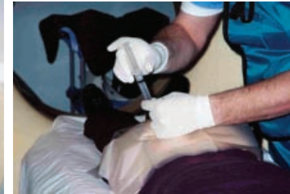


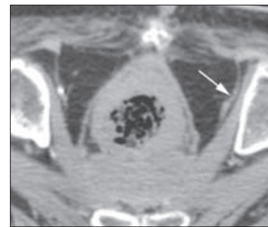
CT scanner used for precise localization of nerve blocks

Image guided pudendal nerve block

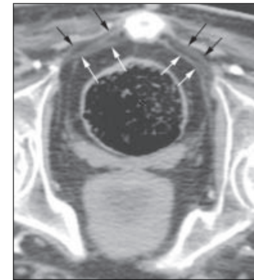
Image guided pudendal nerve block is the most important diagnostic test following history and physical examination. The nerve is blocked by local anesthetic to see if symptoms can be eliminated by numbing the nerve. The block is done where the nerve is passing between the two ligaments or in the Alcock's canal. In the first case, the block would be administered through the buttock into the area adjacent to the ischial tuberosity. In the second case, the block is given directly into the Alcock's canal.







Pudendal neurovascular bundle in Alcock's canal



The pudendal nerve runs between the sacrospinous (white arrows) and sacrotuberous (black arrows) ligaments.

Pudendal Nerve Motor Latency Test

Pudendal Nerve Motor Latency Test is similar to EMG (electromyogram) and measures the speed of nerve conduction. Electrodes fixed in the muscles of the perineum, in the rectum, in the muscles underneath the vulva around the vaginal entrance and the pudendal nerve is stimulated electrically while measuring the speed of the stimulus transmission. This speed is often slower when the nerve is compressed. This test is done relatively infrequently and has been replaced by image guided pudendal nerve blocks.

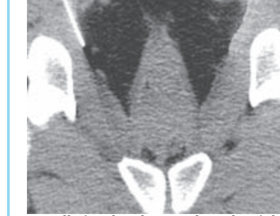
Therapy

Pudendal nerve block and steroid injection

Image guided anesthetic and steroid blocks of the pudendal nerve are used for both diagnosis and treatment. If the pain is relieved immediately following the block it suggests that the pudendal nerve is the source of the symptoms and is probably trapped. Symptoms often return as the local anesthetics wears off. The steroids may or may not relieve symptoms for a longer period of time. If they do, it usually begins to improve about two weeks after the block, with improvements continuing for up to four to five weeks. Two to three blocks may be sufficient, alone, to cure the problem. The purpose of the steroid is to reduce inflammation and allow the nerve more room to glide freely. After the injection, there might be a temporary deterioration due to the steroid for a period of two to ten days (worsening of symptoms).

The blocks are done at the at the ischial spine between the sacrospinous and sacrotuberous ligaments or in the area of Alcock's canal.

Botox (botulinum toxin) injections have been proposed but there is no documentation as to its effect.



Needle in Alcock's canal on the right.

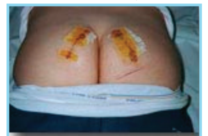
One injection protocol is to administer three sets of injections 1 weeks apart; the first injection is local anesthetics and if this has a positive effect the next two injections is a mixture of methylprednisolone (1 mL of 40 mg/mL solution) and bupivacaine (3 mL of 0.25% solution). The injections are usually given at the level of the ischial spine but if not successful the injection can be given directly into the pudendal canal (Alcock's canal). Usually the injections are unilateral, but patients with bilateral symptoms, both sides may be injected.

Medical Management

Medical management may include an anti-depressant and/or an anti-seizure medication.

Surgery

Surgery is rarely done for this condition. The results are not well documented and the operations are only available in a handful places in France and US. If there is temporary or partial improvement after the injections and if the nerve is still suspected of being compressed some Doctors believe that decompression of the nerve through surgery may be an alternative for selected patients. The nerve is exposed and freed from any entrapment or constriction along its entire course. The surgery is done under general anesthesia and lasts approximately 20-30 minutes per side. After the surgery, it takes a few to several months before a successful outcome can be demonstrated, as the nerve requires a relatively long period of time to heal. Often post surgical injections are needed. Surgery has been reported to be 60% successful, but there are no scientific studies published.



Immediately after surgery